OUR R&D PROJECTS

An important part of our research lines are directly linked to the two main surface materials that we produce: **Silestone**®(quartz agglomerate) and **Dekton**® (ceramic ultra compact material) _**Sustainibility**

SILESTONE OF THE FUTURE

- Lower carbon footprint resins

- Greener chemicals to replace peroxides and cobalt catalysts

- Recycled raw materials to replace crystalline silica.

- New textures and surface effects

- Finer veins and defined colour gradients

DEKTON UNLIMITED

- Solutions for sustainable and energy efficient construction: ventilated façades, flooring and wall panels.

- New raw materials more sustainibility

- Dekton Lite, the lightest version of Dekton

- Full body decoration technology

- New surface effects and functionalities

R&D PROJECTS

SILESTONE KEY CHALLENGES

• SLUDGE REVALORIZATION. Develop a low-energy consumption way to remove the organics (paper and polyester resin) from Silestone sludge.

• BIORESINS. An unsaturated polyester resin having a lower carbon footprint

• STAIN AND ABRASION RESISTANCE. Improve the surface resistance of Silestone

• BREAKAGE. Prevention of breakage of slabs when subjected to openwork cutting

• DESIGN. Produce slabs with finer veins and defined colour gradients

R&D PROJECTS

DEKTON'S CHALLENGES

• Solutions for the measurement of internal tensions in DEKTON. Non-destructive methods.

• Systems for the recovery of evaporated water produced during the processes of spray-drying and drying of slabs.

• Systems of artificial vision for the measurement of defects and contaminations of slabs.

• New applications. Evaluation of new market niches in which big surfaces with high performances are neccesary.

R&D PROJECTS

TOTAL QUALITY CHALLENGES

- No destructive methods for the measurement and classification of our materials.

- Predictive simulation of constructive solution with our materials.

- Sustainable cleaning and maintenance solutions (products + tools) for our materials and applications (kitchen, cladding, flooring, bath, facade, furniture …)

- Systems of artificial vision for the measurement of defects and contaminations of slabs, final products and raw materials.

- . Statistical software for experimental design and predictive models.

INDUSTRIAL CHALLENGES

- Improve mechanical behaviour in Dekton surfaces

- Develop the Best in Class ventilated façades

- Model and predict mechanical behaviours for different façades configurations

- Reduce time to market product developments

- Develop and apply SMED and quick response methods in our industrial system

- Support Total Quality Challenges at industrial level

- Enable and support the Ecological transition and Smart Industry at production level

Another part of our research efforts is linked to projects addressing improvements of our **industrial and logistic processes**

ECOLOGICAL TRANSITION

- Industry Decarbonization
- Circular Economy

SMART INDUSTRY

- Collaborative robotics
- IoT
- 5G technology and cyber security
- digital transformation of the industrial process
- Digital transformation of the business process

SMART TRANSPORT AND SUPPLY CHAIN

- Short-sea-shipping
- Physical internet
- Optimization of maritime routes and intermodal transport
- Last mile logistics optimization

R&D PROJECTS

Another part of our research efforts is linked to projects addressing incorporate **Design** as the company's main driver: new innovative ways of approaching the end consumer

New European Bauhaus
beautiful sustainable together

COMPANY DESIGN

• Drive the design vision and relationship model, internally and externally.

• New model business: cities

PRODUCT DESIGN

• Applications o final product: furniture, bath and facades.

• New development process, incorporating the sustainability and design as the main baseline specificacions